



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/972,787	10/05/2001	David R. Friedman	10519/37	4130

757 7590 12/17/2003

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60611

EXAMINER

ELLIS, KEVIN L

ART UNIT	PAPER NUMBER
----------	--------------

2188

DATE MAILED: 12/17/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/972,787

Applicant(s)

FRIEDMAN ET AL.

Examiner

Kevin L. Ellis

Art Unit

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8, 19-30 and 38-50 is/are allowed.
- 6) ☒ Claim(s) 9-17 and 31-37 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Detailed Action

1. Claims 1-7, 9-22, 24, 25, 27-39, and 41-50 are presented for examination. Claims 8, 23, 26, and 40 have been cancelled by Amendment. This Office Action is in response to the Amendment filed 9/8/03.

Claim Rejections – 35 USC § 103

2. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 9-17 and 31-37 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kikuchi, U.S. Patent 6,058,047.

A) As to claim 9, Kikuchi discloses the invention substantially as claimed. There is a write-many memory device that is limited in the number of times a block of memory can be written to (see Col 1 Line 65 to Col 2 Line 20). The system described by Kikuchi only allows writing to the memory if there has been fewer than N number of writes to a block. The "sideband field" of the present invention can be read upon the 'redundant region' of a block of Kikuchi. As taught by Kikuchi, these "sideband fields" would include a count value of the number of times a block has been written to (see Col 1 Line 66 to Col 2 Line 2). However, Kikuchi does not specifically disclose a sideband field to indicate if the block is free or not. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a "sideband field" that indicates whether the

block is free or not. In fact, this is a fairly common indicator for each block that is used in flash type memory. Without a free indicator the system would not know if a block had been written to or not. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a free indicator in the system of Kikuchi that is checked before a block is written to.

- B) As to claims 10 and 11, it would have been obvious to one having ordinary skill in the art at the time the invention was made that the order of storing a file to the blocks and updating the count of writes to the block can be performed in any order and would have the same end result.
- C) As to claims 12-16, Kikuchi teaches that flash memory can be used as a memory disk (see Fig 2). It was common to use a flash type memory in such a manner. By using the memory as a "disk" the host computer would store data to the memory using a file structure much like it would to a disk drive. Accordingly, the system of Kikuchi would use a file structure for storing data to the memory and would utilize the information of the file structure (location of blocks, free blocks, etc) during the storing of data to the memory and the retrieval of information from the memory.
- D) As to claims 17 and 31-37, Kikuchi discloses the invention substantially as claimed. However, Kikuchi does not specifically disclose adjusting the number of times a block can be written to to something less than the allowable number of writes of the circuitry. It would have been obvious to one having ordinary skill in the art at the time the invention was made that a different number could be stored in the sideband field to limit the number of writes to the memory. Accordingly, it would have been obvious to adjust

the number to any number that the manufacturer wanted to limit the number of writes for the memory.

Allowable Claims

4. Claims 1-8, 19-30, and 38-50 allowed.
5. Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin L. Ellis whose telephone number is 703-305-9659. The examiner can normally be reached on weekdays from 6:00AM-2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on 703-306-2903. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Kevin L. Ellis
Primary Examiner
December 11, 2003

Kevin L. Ellis